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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,910	02/25/2000	Matin Stevens Smith	584-1021	6978
23644	7590	01/25/2005	EXAMINER	
BARNES & THORNBURG P.O. BOX 2786 CHICAGO, IL 60690-2786			NGUYEN, THUAN T	
			ART UNIT	PAPER NUMBER
			2685	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/512,910

Applicant(s)

SMITH ET AL.

Examiner

THUAN T. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,8 and 10-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,8,10-13, and 15-19 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-5, 8, and 10- 19 have been considered but are moot in view of the new ground(s) of rejection.
2. Claims 6-7, 9 and 20 were canceled.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

4. Claims 1-5, 8, 10-13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rappaport (US Patent 6,317,599 B1) in view of Forssen et al. (US Patent 5,848,358).

Regarding claim 1, Rappaport discloses a method and a system for designing or deploying a communications network which considers frequency dependent effects, i.e., by monitoring network link performance between mobile users while still keep maintaining maximum capacity and efficiency, or namely, network optimization; and estimates of link budgets are calculated, if a proposed change is better than the current network deployment, the system can automatically adjust and perform the optimization process. In other words, based on the network prediction or actual link performance, the proposed change can be made to the

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system based on link performance (see Figs. 1-15, and col. 3/line 29 to col. 4/line 45 as network components such as transceivers or base station can be placed and refined to other locations for accommodating the overall layout of the network design and alternate physical layouts, see more at col. 9/line 55 to col. 11/line 19; and col. 15/line 20 to col. 16/line 12 as predictions for RSSI and/or the SNR is taken into account for evaluating the network performance).

Rappaport does not clearly mention the step of adding of an additional subscriber station to the communications network as well as the selection of channel and base station for the additional subscriber station on the basis of a fixed frequency plan; however, Forssen teaches the same technique as within Forssen's system, based on a conventional fixed frequency plan (Forssen, col. 3/lines 20-36), a new mobile subscriber station is introduced, a new channel is allocated for the new mobile station associated to a new base station based on measured spatial information (Forssen, Fig. 2 and col. 4/line 17 to col. 5/line 50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rappaport's system with Forssen's teaching technique of channel allocation for a new mobile subscriber as noted in order to provide an enhanced system that can dynamically offer the proposed change in network configuration including the addition of mobile subscriber stations based on network performance as taught by Rappaport.

As for claim 2, this limitation of determination 'the predicted level of link performance on the basis of location of each base station and the communication links between the base stations and the base station' is met by Rappaport (col. 14/line 14 to col. 15/line 37 as locations of base stations and mobile stations can be predicted and determined based on some predetermined factors).

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As for claim 3, this claim met by Forssen as noted above for a fixed frequency plan.

As for claim 4, Rappaport shows the measuring of link performance (col. 3/lines 40-56 & col. 9/lines 15-29).

As for claim 5, in further view of claim 1 above, Forssen teaches the addition of new mobile subscriber keeps on hold and not affecting the system change if at least one of the determined levels of link performance is not greater than the specified level (Forssen, col. 5/lines 32-36 as the mobile station should not be added if there is a quality limit addressed).

As for claim 8, this claim is met by Rappaport as the channel selection on the basis of information about the communications network in an arbitrary manner (col. 4/lines 1-47 as the designer is free in an arbitrary manner to modify the configuration of the system as needed).

As for claim 10, this limitation is met as Rappaport can add components to the provisioning system, not limited to channels from pre-assigned channel clusters for communication (col. 13/lines 44-63).

As for claim 11, Rappaport discloses wherein the specified level of link performance level is different for different subscriber stations (col. 14/line 53 to col. 15/line 37 as different locations concerns different parameters, RSSI and many other features).

As for claim 12, Rappaport further mention this predicted link performance levels are determined based on the basis of estimated link budgets (col. 13/line 64 to col. 14/line 13 as the designer can modify the component's cost by replacing and has some options to work around).

As for claim 13, this claim is met as Rappaport discloses as prediction configuration can be based on RSSI, C/I and/or C/N, which suggests a combination of these estimation for calculating noises and interference levels of surrounding cells (col. 15/lines 20-37).

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As for claim 15, this claim is met as described earlier in claim 1 in view of Forsen.

As for claim 16, this claim is met by Rappaport since Rappaport does not use a fixed frequency plan.

As for claims 17-19, these claims are rejected for the reasons given in the scope of claim 1 as discussed in details above.

***Allowable Subject Matter***

5. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

As for claim 14, the closest prior arts of record issued to Rappaport and Forsen do not further suggest a method of deploying a fixed wireless access communications network as cited in combined claim 1 and claim 5 AND the additional step of further "comprises the step of calculating a ratio of a number of additional subscriber stations placed on hold to a number of requests including a proposed change to the communications network comprising the proposed additional of an additional subscriber station" as cited in claim 14.

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***Conclusion***

7. **Any response to this action should be mailed to:**  
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9306, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to Crystal Park II,  
2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.



**TONY T. NGUYEN**  
**PATENT EXAMINER**

Tony T. Nguyen  
Art Unit 2685  
January 12, 2005